Haley Turner
Robert L. Williams

Vocabulary Development and Performance on Multiple-Choice Exams in Large Entry-level Courses

Scores on a vocabulary test given at the beginning of two semesters in a large entry-level course predicted performance on multiple-choice exams more strongly than pre-course knowledge and critical thinking. Words on the vocabulary instrument were derived from multiple-choice exam items in the course. Although commonly used in the course, these words were not specific to the technical content of the course. Students took the vocabulary instrument at the beginning and end of the semester, with students in both semesters making significant gains on academic vocabulary. Students in the bottom quartile on pre-course vocabulary who made substantial gains in vocabulary development during the semester scored higher on course exams than similar students who made minimal gains in vocabulary development.

Most college students at major universities are required to take large introductory courses. It is not uncommon for these courses to be taught in a lecture format and to assess student knowledge through multiple-choice exams. Despite this tradition, both students and instructors have voiced numerous complaints about multiple-choice exams. One of the principal complaints is that items on multiple-choice exams can be difficult to understand, causing students to miss items even when they reportedly know the material on which the questions are based (Wallace & Williams, 2003). Both complex syntax and unfamiliar vocabulary on the exam can ob-

scure student understanding of what exam questions are asking, greatly increasing the likelihood of incorrect answers.

Although some instructors permit students to ask about unclear terminology during an exam, students in a large class may be disinclined to request such clarification from an instructor whom they only know as the course lecturer. On the other hand, if *all* students asked the instructor for clarification of *all* potentially unclear terms, the amount of distractible movement and conversation in the testing room could be considerable during the exam. Furthermore, the very same students who have difficulty with the language of the exam may be the most distracted by such movement and conversation during the exam. Thus, a more efficient and effective procedure for helping students with the unfamiliar vocabulary on multiple-choice exams needs to be developed for use in large courses that rely heavily on multiple-choice exams.

In addition to its potential impact on multiple-choice exam performance, students' vocabulary appears to be a substantial predictor of academic performance in general. Several studies show that student vocabulary is a consistent predictor of grades in a variety of courses, which presumably included several assessment dimensions besides multiple-choice exams. For example, Pedrini and Pedrini (1975) found that vocabulary scores from the Nelson-Denny Reading Test (NDRT) explained approximately 35% of the variance in college grades. Similarly, Emmeluth (1979) reported that the vocabulary portion of the NDRT significantly predicted final grades in an introductory biology course. Finally, Levin (1976) indicated that vocabulary raw scores on the NDRT were positively related to final grades in college freshman and sophomore English and Psychology.

Vocabulary mastery also plays a seminal role in intelligence testing. On the Wechsler Intelligence Scale for Children–IV (WISC-IV), vocabulary subtest scores correlated higher with Full Scale IQ scores (r = .79) than did the other subtests (Sattler & Dumont, 2004). Correlations between the other WISC-IV subtests and the Full Scale ranged from .26 to .77. Factor analysis further showed that the vocabulary subtest had the highest *g* (general intelligence) loading on the test, accounting for 69% of the variance in *g*. This strong relationship between vocabulary and IQ scores suggests that academic vocabulary may underlie a variety of intellectual skills that contribute to success in college courses.

Despite the potential importance of academic vocabulary in college courses, research indicates that college students are not doing well in their vocabulary development. For example, Greif (1982) found that college juniors and seniors could only define about 19% of selected words from a daily newspaper. A comparison of college freshmen's vocabulary

development in 1928 and 1978 revealed that 1928 freshmen performed significantly better on vocabulary development than did the 1978 group (Eurich, 1980). The reading level of the latter group was no better than that of high school juniors and seniors 50 years earlier. More recently, Kuehn (1996) concluded that poor vocabulary development was the most important barrier to lecture and text comprehension in college courses. Simpson and Dwyer (1991) reported that college students consider a limited vocabulary to be a major impediment to course success.

Given the apparent linkage between academic vocabulary and college performance, avenues for improving vocabulary must be given priority (Eurich, 1980; Greif, 1982). Special programs and courses committed to the enhancement of reading skills for developmental students have produced varying degrees of success in promoting vocabulary development (Farley & Elmore, 1992; Hodge, 1993; Joseph, 1984; Miller, 1974; Taylor & Rosecrans, 1986). Some of these studies (e.g., Hodge, 1993; Joseph, 1984) reported good success in improving vocabulary, comprehension, and grades; others (e.g., Miller, 1974) reported success in improving vocabulary but not comprehension; and some (e.g., Taylor & Rosecrans, 1986) were unsuccessful in improving vocabulary scores. However, beyond the systematic vocabulary building attempted in developmental programs, specialized instruction in vocabulary development appears minimal in regular college courses.

For conventional courses to facilitate students' vocabulary development, instructors may need to highlight the words to be learned. For example, Kettlewell (1983) suggested the use of vocabulary previews as one method to help students understand course texts. This procedure could entail identifying new vocabulary to be encountered in a reading assignment and asking students to look up those words prior to reading the assignment. However, mastery of these words will likely require multiple exposures in a variety of contexts. Rott (1999) showed positive results for both acquisition and retention when students had two, four, or six exposures to an unknown word. However, six exposures produced significantly more word knowledge than two or four exposures.

Although the need for additional research on the role of academic vocabulary in large introductory courses is multi-faceted, one place to begin this expanded research is to compare the predictive potential of pre-course vocabulary with that of other established predictors of course success. One recognized predictor of success in college courses is students' critical thinking ability. Several studies have reported significant relationships between critical thinking and a variety of performance measures in college courses (Gadzella, Ginther, & Bryant, 1997; McCammon, Golder, & Wuensch, 1988; Williams & Worth, 2002; Wilson &

Wagner, 1981). Pre-course critical thinking has been especially predictive of success on multiple-choice exams (Wallace & Williams, 2003; Williams, Oliver, Allin, Winn, & Booher, 2003b). In fact, Williams and Worth (2002) found that entry-level critical thinking was a better predictor of multiple-choice exam performance than either course attendance or student note-taking. Certainly, critical thinking is an especially strong predictor of performance in courses where the multiple-choice exams require considerable critical thinking (Wallace & Williams, 2003).

Another comparative measure that appears pivotal to success in college courses is pre-course knowledge. Although assessment of this variable is seldom addressed in the research literature, educators apparently believe that it must make a difference in students' course performance. Otherwise, why would so many undergraduate courses require prerequisites (Perlman & McCann, 1999)? One of the few published studies to address the predictive potential of pre-course knowledge in large undergraduate courses found this variable to better predict performance on essay quizzes, course projects, and multiple-choice exams than did critical thinking (Williams, Oliver, Allin, Winn, & Booher, 2003a). Although pre-course knowledge was assessed in an essay format, it proved to be an especially good predictor of scores on multiple-choice exams in the course (r = .49).

Given the potential of academic vocabulary to predict success in college courses, the limited vocabulary development among college students, and the need to improve students' vocabulary through systematic course experiences, we developed a three-fold framework for the current study: (a) determine how well pre-course vocabulary, compared to other pre-course dimensions (i.e., pre-course critical thinking and pre-course knowledge), predicted success on multiple-choice exams in a large entry-level course; (b) determine how much students' academic vocabulary improved from the beginning to the end of a course with a feature targeting vocabulary development; and (c) determine the extent to which improvement in academic vocabulary was related to performance on the multiple-choice exams in the course.

Method

Participants

Students in 12 sections of an undergraduate course in human development participated in various assessments of the study. The course is required for students entering the Teacher-Education program at a large southeastern university. The data were collected over two consecutive semesters in classes ranging from 25 to 55 students. Only students who took an academic vocabulary pretest and posttest served as participants

(*N* = 418: 218 for the first semester and 200 for the second semester). In the first semester, 68% of the students were women and 32% were men. In the second semester, 67% of the students were women and 29% were men, with 4% not indicating their gender. The academic classification for the first semester was 2% freshmen, 45% sophomores, 25% juniors, 18% seniors, and 10% graduate students. The academic classification the second semester was 12% freshmen, 48% sophomores, 22% juniors, 10% seniors, and 8% graduate students.

Assessment Measures

The vocabulary assessment used a multiple-choice format that required students to choose which of 5 terms most closely approximated the meaning for each of 50 academic terms, all of which were embedded in some multiple-choice exam items and consequently could have affected students' understanding of those items. Although subsumed in exam items, the academic terms did not constitute the focus of any items. The terms (e.g., veracity, phenomenon, plethora) on the vocabulary test were words on the course exams that some students had previously asked instructors to clarify during exams. (See Appendix A for a listing of the vocabulary items.)

The first dimension used as a comparative predictor to pre-course vocabulary was a measure of critical thinking, specifically the *Watson-Glaser Critical Thinking Appraisal* (WGCTA). We used the abbreviated Form S (designed primarily for adults) derived from the original Form A of the WGCTA (Watson & Glaser, 1994). Each of the 40 items on Form S included two to five options, only one of which was correct. Assumptions and information necessary to answer each item were provided in the test itself. Both the internal consistency and the test-retest reliability of Form S were reported in the test manual to be .81. The WGCTA has previously proven to be one of the strongest predictors of exam performance in the course (Wallace & Williams, 2003; Williams, Oliver, & Stockdale, 2004; Williams & Worth, 2002).

A second comparison predictor of exam scores, a 50-item multiple-choice exam over major course issues, was administered at the beginning of the course. This pre-course exam was similar in format and difficulty to the exams students later took at the conclusion of units. However, none of the pre-course items were repeated in the unit exams. The pre-course exam included 10 items from each of the five major units in the course: physical development, cognitive development, psychological development, social development, and character development. Students received no feedback regarding their scores on the pre-course exam.

As the principal criterion variable in the study, 50-item multiple-choice

exams were given at the end of each unit. Each exam was based on selected journal articles, sections in a small customized text, portions of the instructor notes provided to students, a videotape shown in class, and information provided in class by the instructor. The exams required both a mastery of information in the unit and the use of that information in analyzing issues described in many exam items. Past analysis of these exams has shown that about 26% of the items were strictly factual in nature, about 58% required conceptual application of information in problem solving, and about 16% involved a mixture of factual recall and conceptual application (Wallace & Williams, 2003). The internal consistency of student responses across the composite unit exams has previously been .87 (Turner et al., in press). Approximately 50% of the vocabulary terms were embedded in items on the unit exams. The remaining vocabulary terms appeared on practice exams and the final exam, which were not included in the current study because additional procedures and contingencies had been applied to them.

General Instructional Strategy

The twelve sections of the target course all used the same syllabus, included the same assessment instruments, covered the same course content, had the same study questions over course content, followed approximately the same schedule, and were supervised by the same senior professor. The instructional strategy for vocabulary development was the same across all sections and required minimal adjustment in course procedures. Following the vocabulary pretest, instructors posted vocabulary terms that appeared within exam items at the course Web site and announced that exam items would incorporate many of those terms. This posting indicated what new terms would be incorporated in each unit exam. Students were informed that once a word appeared in a unit exam, it might be used again in a later exam. Students were told that they would not be permitted to ask for definitions of any posted words during exams, but they could ask for confirmation of their understanding of these terms. Because the terms were taken from the existing exams in the course, no exam revisions were required to include the targeted vocabulary in the exams. Plus, having posted these terms for students to learn, instructors felt freer to use the terms in instructor presentations.

Credit Contingencies

Students could earn a small amount of credit (approximately 2 to 3 % of the total course credit) for participating in the vocabulary assessment. They received bonus credit for the vocabulary pretest and regular credit

for the posttest. Credit was awarded according to the following ratios: 1-5 items correct = 1 point, 6-10 items correct = 2 points, 11-15 items correct = 3 points, 16-20 items correct = 4 points, 21-25 items correct = 5 points, 26-30 items correct = 6 points, 31-35 items correct = 7 points, 36-40 items correct = 8 points, 41-45 items correct = 9 points, and 46-50 items correct = 10 points. Although close to 100% of the students participated in the pre-vocabulary assessment, fewer students (91%) participated in the post-vocabulary assessment. This decrease in post-vocabulary participation was largely due to student attrition in the course.

Results

This section presents findings in the following sequence: (a) comparative power of pre-vocabulary, critical thinking, and pre-course knowledge in predicting cumulative scores on the unit multiple-choice exams; (b) change in pre-course vocabulary scores from the beginning to the end of the course; (c) relationship between improvement on vocabulary and performance on the multiple-choice exams. Statistical analyses included correlations, stepwise regression, matched-pairs *t* tests, and independent-samples *t* tests.

Prediction of Exam Scores

Table 1 shows that the correlations between pre-vocabulary scores and unit-exam scores tended to be higher than the correlations of either pre-course knowledge or critical thinking with exam scores. This pattern was consistent across the two semesters. In the first semester, the correlation between pre-vocabulary and unit-exam scores was significantly ($p < .05$) higher than the correlation between critical thinking and unit-exam scores but not significantly higher than the correlation between pre-course knowledge and unit-exam scores. In the second semester, the correlation between pre-vocabulary and unit-exam scores was significantly ($p < .05$) higher than either of the other correlations. The correlations across the two semesters between pre-vocabulary and unit-exam scores (.55 and .59) would be considered large according to Cohen's (1988) guidelines for evaluating the magnitude of correlations. The remaining correlations between the comparison predictors and exam scores were moderate to large in magnitude (ranging from .43 to .51).

As a follow-up to the correlational analysis, a stepwise regression analysis was done each semester to determine which pre-course dimension took primacy over the other pre-course measures in predicting exam scores. Table 2 shows that the results were generally consistent across the two semesters. Pre-vocabulary accounted for 31% of the variance

in unit-exam scores the first semester and 35% the second semester. In the first semester, pre-course knowledge and critical thinking added modest predictive potential, with the combination of the three predictors accounting for 40% of the variance in unit-exam scores. In the second semester, only pre-course knowledge added to the predictive potential of pre-vocabulary, with the combination of the two predictors accounting for 38% of the variance in unit-exam scores.

Table1
Correlations Between Pre-Course Predictors and Exam Scores across Semesters

	Total semester exam scores	
Pre-course predictor	Semester 1 exams	Semester 2 exams
Pre-vocabulary	.55	.59
Pre-course knowledge	.51	.47
Critical thinking	.44	.43

Note. All correlations were significant at the .01 level.

Table 2
Stepwise Regression for Pre-Course Predictors of Exam Totals

Semester 1	
Pre-vocabulary	31% of variance in exam scores
Pre-vocabulary and pre-course knowledge	38% of variance in exam scores
Pre-vocabulary, pre-course knowledge, and critical thinking	40% of variance in exam scores
Semester 2	
Pre-vocabulary	35% of variance in exam scores
Pre-vocabulary and pre-course knowledge	38% of variance in exam scores

Note. In both semesters, pre-vocabulary, pre-course knowledge, and critical thinking were assessed at the beginning of the semester and were used as potential predictors of cumulative scores on the multiple-choice exams across the five units in the course. The right column indicates the amount of variance in exam scores explained by each combination of predictor variables.

Pre- to Post-Changes in Vocabulary

The pre-vocabulary scores were quite consistent across the two semesters: 29.99 the first semester and 28.07 the second semester. Similarly, the post-vocabulary scores were relatively close across the two semesters: 39.48 the first semester and 37.71 the second semester. Thus, the first semester had approximately a two-point vocabulary advantage over the second semester both at the beginning and end of the semester. The difference between the pre- and post-vocabulary scores was highly significant each semester: $t(217) = 22.27$, $p = .0001$ for the first semester and $t(199) = 19.101$, $p = .0001$ for the second semester. The effect size for the difference between the pre-vocabulary and post-vocabulary score was 1.25 the first semester and virtually the same the second semester (1.26). According to Cohen's (1988) guidelines for judging effect sizes, both of these effect sizes would be considered very large.

Relationship between Vocabulary Gains and Exam Scores

The first step in determining the linkage between gains in vocabulary scores and unit-exam scores was to identify students who scored relatively low on the pre-vocabulary test, thus leaving ample room for improvement on vocabulary. An approximation of the bottom quartile on pre-vocabulary scores was identified for each semester. The closest match for the bottom quartile on pre-vocabulary scores across the two semesters was a score of 24 and below out of a possible 50. The next step was to determine the size of the pre- to post-vocabulary gain for each student in the bottom quartile. The pre- to post-gains across students in the bottom quartile ranged from -2 to +26.

For each of the two semesters, we identified a subgroup of students scoring 24 or below on the pre-vocabulary test that had made the greatest gains on vocabulary and a subgroup that had made the least gains. For the first semester, the high gainers had improved by at least 17 points on vocabulary and the low gainers had improved by 9 points or less, with an n of 17 in each subgroup. For the second semester, the high gainers had improved by at least 19 points and the low gainers had improved by 9 points or less, with an n of 19 in each subgroup.

We then compared the high and low gainers in each semester on their unit exam scores (see Table 3). In the first semester, the high gainers earned a mean total of 190.94 out of a possible 250 on unit exams, with a standard deviation *(SD)* of 21.01. In contrast, the low gainers had a mean total of 175.18 on the unit exams, with an *SD* of 21.98. An independent samples t test showed this difference to be statistically significant, $t(32) = 2.14$, $p < .05$, with the effect size for this difference in first-semester means being .72. The second semester, the high gainers earned a mean

total of 185.32 on the unit-exam scores (*SD* = 25.85), whereas the low gainers had a mean total of 165.63 on the unit-exam scores (*SD* = 21.54). The difference in these means also proved statistically significant, $t(36) = 2.55$, $p < .05$, with the effect size for the difference in the second-semester means being .91. Thus, students beginning the course near the lowest in the class on vocabulary, but who made sizeable gains in their academic vocabulary, did substantially better on unit exams than similar students who made negligible gains in their vocabulary development.

Table 3
Difference in Exam-Total Means Between High- and Low-Gainers on Vocabulary Scores

Semester		Exam–total means	Significance[a]	Effect size[b]
I	High-gainers (n = 17)	190.94	$p < .05$	.72
I	Low-gainers (n = 17)	175.18		
II	High-gainers (n = 19)	185.32	$p < .05$	.91
II	Low-gainers (n = 19)	165.63		

[a]Significance = significance level for differences between the exam-total means for the high- and low-gainers in vocabulary. [b]Effect size = Effect size for difference in exam-total means between high- and low-gainers on vocabulary. Computed by subtracting the low exam-total mean from the high exam-total mean and dividing by the *SD* of the low group.

Discussion

The first objective of the current study was to determine if students' pre-course academic vocabulary constitutes an important predictor of success in college courses, especially performance on multiple-choice exams involving potentially unfamiliar vocabulary. A second objective was to determine if alerting students to potentially unfamiliar words on exams would improve their mastery of these words during the course. A third objective was to assess the relationship between improvement in vocabulary and performance on multiple-choice exams that included a substantial number of the vocabulary terms. The results were promising on all three counts.

With respect to the first objective, vocabulary assessment at the beginning of the course proved to be a stronger predictor of success on multiple-choice exams than two established predictors of exam success. As previously noted, Williams and Worth (2002) found pre-course critical

thinking to be a stronger predictor of multiple-choice exam performance than either course attendance or note-taking. In addition, Williams et al. (2003a) have shown pre-course knowledge, assessed through an essay exam over major course concepts, to be a stronger predictor of performance on course multiple-choice exams than critical thinking, which also correlated significantly with exam scores. The current study indicates that even though pre-course knowledge and critical thinking are both strong predictors of performance on multiple-choice exams, pre-course mastery of academic terms embedded in some exam items proved to be the strongest predictor of exam performance throughout the course.

Perhaps even more important than assessing the predictive potential of pre-course vocabulary is determining the extent to which students' vocabulary can be increased with only minor alterations in course structure. In the current study, potentially unfamiliar vocabulary words were identified in existing exam items and then listed for student mastery at the course Web site. In addition, a small amount of bonus credit was attached to pre-vocabulary scores and regular credit to post-vocabulary scores. However, this additional credit amounted to just 2 to 3% of the total course credit and, consequently, minimally affected the grade distribution in the course. Perhaps a larger consideration than vocabulary credit for most students was the potential impact of vocabulary development on their exam scores. Presumably, few course activities capture students' attention more than course exams. Any prior information (such as academic vocabulary) that could help them do better on exams would likely peak their interest.

Vocabulary development in the target course likely benefited students' exam performance in at least two ways: (a) an expanded vocabulary helped students better understand test items, and (b) this vocabulary mastery minimized distractions during the exam. With respect to the latter possibility, instructors anecdotally noted that fewer students raised their hands with vocabulary questions during the exams than in previous semesters when no vocabulary words were posted. In fact, students rarely asked any questions during the exams, making for an extremely quiet atmosphere for taking the exams. This is a particularly important consideration in large classes that fully occupy the physical space in a classroom. Instead of the students' approaching the instructor to ask questions or the instructor's approaching students to answer questions during exams, negligible physical movement and conversation in the room during the exam probably enhances student concentration on the exam.

One of the most compelling features of the current study was the

consistency in findings across the two semesters. For all three objectives in the study, the pattern of findings was essentially the same across semesters. Compared to other established predictors of exam performance, pre-vocabulary proved to be the primary predictor of performance on the multiple-choice exams in both semesters. Students made sizeable and generally equivalent gains in vocabulary across the two semesters. Students in both semesters who did poorly on the pre-vocabulary assessment, but who gained substantially in vocabulary during the semester, did better on the course exams than students who did poorly on the pre-vocabulary assessment and gained little on vocabulary during the course. Thus, both semesters confirm the predictive potential of pre-course vocabulary, the potential to improve students' vocabulary with minor additions to the course structure, and the relationship between vocabulary gains and multiple-choice exam performance.

A potentially important issue in judging the generalizability of the findings in the current study was the procedure for selecting the vocabulary words to be mastered. Selecting words already embedded in course materials has both advantages and disadvantages. A comparison of our 50 highlighted words with Coxhead's (2000) 570 word families in academic texts revealed that only 14% of our words appeared in Coxhead's word families. It should be noted that none of Coxhead's word families reflected the most commonly used words in English, such as those included in West's (1953) list of 2,000 families of general-service words. Instead, Coxhead's word families represented terms more likely to occur in academic than non-academic materials. Given that only a small percentage of our words were included in Coxhead's academic word families, our targeted vocabulary did not represent words widely used across academic areas. Nonetheless, our vocabulary list did include words that would add to the diversity and precision of language descriptions in most any academic area.

Whatever words are targeted for vocabulary assessment, explicit instructional procedures probably will be needed to maximize student mastery of those words (Ellis, 1990). Such procedures are most likely to be used in developmental courses with students whose entrance-exam scores and high school grade point averages suggest potential problems in mastering college work. These courses often specifically emphasize vocabulary development. However, the impact of such courses has been muted in at least two ways: (a) relatively few students take these courses, and (b) the vocabulary development may not be anchored in meaningful course content. What most students probably need is an emphasis on vocabulary development in their regular courses so they can use the newly acquired vocabulary in understanding and discussing the content of those courses.

The findings of this study offer multiple applications in regular college courses. The vocabulary strategy can be applied in any course, not just courses specializing in vocabulary development. The strategy requires little extra work on the part of teachers. For example, instructors need not generate a list of academic words for students to learn during a course but rather just select potentially unfamiliar words embedded in course materials (e.g., readings, syllabus, instructor notes, test items). On the other hand, some teachers may elect to highlight words that commonly occur across academic contexts to promote generalizable gains in vocabulary. Whatever the case, highlighting potentially unfamiliar words that appear in course materials and providing an incentive for students to master those words will make course activities easier for both students and teachers than would depending solely on incidental learning for mastery of unfamiliar terms (Ellis, 1990).

To determine the level of student improvement in vocabulary development, teachers will need to have a way to assess student progress in vocabulary mastery during the course. Although we developed a multiple-choice format for the vocabulary assessment, teachers could use a short-answer or essay format for this assessment. However, a multiple-choice format makes scoring much easier than an essay format. Plus, teachers could find that developing a multiple-choice vocabulary test with "credible" options for each item would sharpen their own understanding of the targeted words. Whatever the nature of the pre- and post-assessment, teachers will discover the assessment procedures used in the current study will take minimal class time, 15 to 20 minutes per assessment. Thus, this non-invasive approach to vocabulary development can easily be woven into the fabric of any course with little time investment but great dividends for both students (e.g., they could improve their performance in courses and expand their vocabulary as well) and teachers (e.g., they could improve the flow of course activities and make students less dependent on teachers to explain unfamiliar words).

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Appendix A

Vocabulary Assessment Items

(Note for readers: Correct choices have been marked with an asterisk.)

1. decelerate: (a) attack (b) criticize (c) speed up (d) throw (e) slow down*
2. veracity: (a) fantasy (b) attack (c) explanation (d) truthfulness* (e) deception
3. antidote: (a) medicine (b) riddle (c) story (d) saying (e) counteractant*
4. delusion: (a) fallacy* (b) blunder (c) fabrication (d) trap (e) evasion
5. gravitate: (a) jumped high (b) left behind (c) stood up (d) attracted to* (e) missed out
6. ameliorate: (a) disparage (b) clarify (c) improve* (d) stabilize (e) elaborate
7. insatiable: (a) unquenchable* (b) filled (c) empty (d) diabolical (e) discouraging

8. pernicious: (a) persistent (b) enduring (c) harmful* (d) emotional (e) excessive
9. adaptive: (a) exhausting (b) suitable* (c) smooth (d) weak (e) humorous
10. moderate (verb): (a) beautify (b) intensify (c) degrade (d) aggravate (e) temper*
11. espouse: (a) dispute (b) question (c) adopt* (d) deny (e) analyze
12. synonymous: (a) pleasant (b) identical* (c) decorous (d) intense (e) impressive
13. precede: (a) undermine (b) follow (c) lead* (d) endure (e) support
14. phenomenon: (a) disaster (b) occurrence* (c) disclosure (d) discovery (e) pity
15. captivate: (a) fascinate* (b) bore (c) confuse (d) concur (e) amuse
16. reciprocal: (a) similar (b) uneven (c) appealing (d) irresistible (e) mutual*
17. ascertain: (a) determine* (b) dispute (c) guess (d) resist (e) comply
18. unilateral: (a) balanced (b) horizontal (c) one-sided* (d) inclusive (e) multiple
19. altercation: (a) argument* (b) agreement (c) detachment (d) fulfillment (e) elevation
20. antithetical: (a) similar (b) opposing* (c) harmonious (d) bad (e) disgusting
21. exacerbate: (a) appease (b) pacify (c) lessen (d) reconcile (e) inflame*
22. irrevocable: (a) changeable (b) binding* (c) weak (d) harsh (e) forgivable
23. proliferate: (a) stymie (b) promote (c) multiply* (d) restrict (e) boost
24. commensurate: (a) different (b) commiserable (c) opposite (d) equivalent* (e) good
25. denigrate: (a) deny (b) defuse (c) denude (d) defame* (e) depart
26. cessation: (a) momentum (b) initiative (c) dilution (d) exhilaration (e) termination*
27. efficacious: (a) harmful (b) effective* (c) neutral (d) easy (e) enjoyable
28. empirical: (a) observable* (b) conjectural (c) theoretical (d) emotional (e) powerful

29. egalitarian: (a) good (b) fair* (c) egregious (d) kind (e) confidential
30. tantamount: (a) exact (b) compatible (c) complex (d) equivalent* (e) opposite
31. elucidate: (a) magnify (b) clarify* (c) confuse (d) inspire (e) excite
32. pervasive: (a) widespread* (b) localized (c) clear (d) vague (e) deceptive
33. eschew: (a) choose (b) grasp (c) slip (d) fall (e) shun*
34. impregnable: (a) exposed (b) susceptible (c) secure* (d) sterile (e) changeable
35. indices: (a) illusions (b) proclamations (c) hypotheses (d) inhibitors (e) indicators*
36. predisposition: (a) temperament (b) weakness (c) gap (d) emphasis (e) inclination*
37. plethora: (a) deficiency (b) surplus* (c) outcome (d) devastation (e) reflection
38. intractable: (a) relaxed (b) tolerant (c) focused (d) unyielding* (e) dynamic
39. impede: (a) hinder* (b) thrust (c) promote (d) accelerate (e) elevate
40. dichotomous: (a) unified (b) declassified (c) divided* (d) baffled (e) desperate
41. analogous: (a) different (b) multiple (c) comparable* (d) classification (e) subtle
42. pinnacle: (a) total (b) perspective (c) outcome (d) cliff (e) peak*
43. satiation: (a) deprivation (b) discomfort (c) excitement (d) repletion* (e) trepidation
44. proportional: (a) orderly (b) transparent (c) reflective (d) resistant
(e) corresponding*
45. incongruous: (a) steady (b) incomplete (c) incompatible* (d) inflexible (e) deceitful
46. anecdote: (a) cure (b) narrative* (c) ease (d) conclusion (e) obstruction
47. inextricable: (a) infallible (b) devious (c) implicit (d) undeniable (e) inseparable*
48. concomitant: (a) independent (b) collateral* (c) timeless (d) incisive (e) peculiar
49. innocuous: (a) harmless* (b) offensive (c) poisonous (d) irresistible (e) tenuous

50. enact: (a) empower (b) allow (c) preclude (d) suggest (e) establish*

Haley C. Turner *is a fifth-year Ph.D. student in the School Psychology Program at the University of Tennessee, Knoxville. She has published several studies related to instructional variables that improve college students' performance in large entry-level courses. She has served four years as a Graduate Teaching Assistant in a course taken primarily by teacher-education students. She can be reached at the University of Tennessee, Department of Educational Psychology and Counseling, CA 527, Knoxville, TN 37996, E-mail* acheer927@aol.com. ***Robert L. Williams*** *is a Professor in the School Psychology Program at the University of Tennessee, Knoxville. He has published many journal articles and several textbooks related to student characteristics and instructional variables predictive of academic performance. He supervises the teaching of a large entry-level course in teacher education taken by several hundred students a year. He can be reached at the University of Tennessee, Department of Educational Psychology and Counseling, CA 516, Knoxville, TN 37996. E-mail:* bobwilliams@utk.edu.